Amendments to the Claims

Claims 1-13 (Cancelled)

Claim 14 (Currently amended): A method of assaying for protease activity inside a cell, comprising:

measuring an initial fluorescence activity in said cell to establish a baseline;

introducing into ~~a~~ said cell a nucleic acid construct having a sequence encoding a chimeric protein comprising an amino terminal portion of a green fluorescent reporter protein operably linked to a ~~serine protease substrate sequence followed by a~~ sequence encoding a protease substrate followed by a sequence encoding a carboxyl terminal portion of the green fluorescent reporter protein,~~;expressing the serine protease substrate sequence in the presence of a protease~~ wherein the presence of a peptide bond between an amino terminal portion and a carboxyl-terminal portion of said protease substrate sequence is essential to generate or maintain fluorescence of said chimeric protein; and

~~detecting using fluorescence activated cell sorting (FACS) a change in quenching of fluorescence by cleavage in said serine protease substrate sequence, wherein the change in quenching is an indication of protease activity~~measuring a change in the fluorescence activity caused by proteolytic cleavage of said chimeric protein in said cell.

Claims 15-29 (Cancelled)

Claim 30 (Currently amended): A method of assaying for proteolytic cleavage of a serine protease substrate inside a cell, comprising:

measuring an initial fluorescence activity in said cell to establish a baseline;

introducing into ~~a~~ said cell a nucleic acid construct having a sequence encoding a chimeric protein comprising an amino terminal portion of a green fluorescent reporter protein operably linked to a sequence encoding a serine protease substrate sequence followed by a sequence encoding a carboxyl terminal portion of a green fluorescent reporter protein, wherein ~~when said substrate sequence is cleaved, an increase in fluorescence is produced;~~

~~expressing said substrate sequence in the presence of a serine protease~~ the presence of a peptide bond between an amino terminal portion and a carboxyl-terminal portion of said serine protease substrate sequence is essential to generate or maintain fluorescence of said chimeric protein; and

~~detecting an increase in fluorescent signal produced from proteolytic cleavage of said substrate sequence~~measuring a change in the fluorescence activity caused by proteolytic cleavage of said chimeric protein in said cell.

Claim 31 (New): The method of claim 30 wherein said serine protease substrate sequence is a NS3/4A serine protease substrate sequence.

Claim 32 (New): The method of claim 30 wherein said serine protease is a NS3/4A serine protease.

Claim 33 (New): The method of claim 33 wherein said NS3/4A serine protease is a mutant NS3/4A protease having a serine converted to a glycine.